Communicable Disease Report

Hawai'i Department of Health
Communicable Disease Division

September/October 2000

New Targeted Testing Program for Tuberculosis Infection in Hawai`i

In a new program initiative from the Centers for Disease Control and Prevention (CDC), the Department of Health's (DOH) Tuberculosis (TB) Control Program was recently awarded $110,000 to develop a new Targeted Testing (TT) Program in Hawai`i. New national guidelines released by the American Thoracic Society (ATS) and CDC in April 2000 recommend **targeted** tuberculin skin testing (TST) by state and county health departments for persons who are at risk for TB infection and progression to active disease.[1,2] Analysis of TB data from Hawai`i identified populations at risk for TB infection and disease. These communities will be included in the new TT Program.

Latent tuberculosis infection (LTBI) is a new term for infection with *Mycobacterium tuberculosis.* A person identified with LTBI will be offered a medical evaluation, antibiotic treatment, and follow-up through the Hawai`i TB Control Program.

Incidence

The State of Hawai`i reported the highest TB incidence rate in the United States (U.S.) in 1999 (15.5 new cases per 100,000 population). Although the national trend in TB case rates is declining, Hawai`i reported high annual case rates from 1992 through 1998.

Age of TB Cases

TB incidence increases with age in Hawai`i. From 1992-1996, 85.6% of all TB cases were ≥65 years old, with 5% <14 years old. In 1958, there were 62 TB cases among children <9 years of age. The incidence has generally decreased among children with seven cases reported in 1997, four cases in 1998, 0 cases in 1999, and two cases from January through June 2000.

Effects of Immigration

Hawai`i's TB case rates are most influenced by immigration patterns in the state. Hawai`i continues to annually report the highest proportion of foreign-born TB cases of any state in the nation. In 1999, nearly 82% of Hawai`i's TB cases occurred among the foreign-born (nearly twice the nationally reported rate of 42%). The Immigration Act of 1990 and the Compact of Free Association (COFA) have resulted in an influx of immigrants from nations in Asia and the Pacific Basin where TB is endemic. There are approximately 7,500 to 9,000 immigrants arriving in Hawai`i each year. Historically, immigration to Hawai`i has been from persons from the Philippines, Korea, Japan, People's Republic of China, Taiwan, Vietnam and other areas (Western Samoa, Hong Kong, United Kingdom, New Zealand). However, there has been a 51% decrease in immigration in the past three years (DOH personal communication).

Immigrants from the Philippines accounted for nearly 56% of the TB cases in 1999 vs. 18.5% in U.S. citizens including Hawaii residents. The remaining 25.6% occurred in immigrants primarily from Pacific rim patients. One in every three TB cases worldwide lives in this region, and TB is the leading infectious disease cause of death in the 15-64 year age group in the region.

Latent TB Infection

Chapter 164-11 of the DOH Administrative Rules mandates TB screening among several well defined population groups, including: children prior to registration in school, students matriculating in post-secondary schools, school personnel, health care workers, and food handlers. Non-specific administrative TB screening in the general population has generally decreased since 1997.

Risk Factors for LTBI and TB Disease

Population-based risk factors for LTBI

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Influenza Vaccine Shortage

Annual vaccination against influenza is the primary means for minimizing serious adverse outcomes from influenza virus infections. These infections result in approximately 20,000 deaths and 110,000 hospitalizations per year in the United States (U.S.).

For the 2000-01 influenza season in the U. S., lower than anticipated production yields for this year's influenza A(H3N2) vaccine component, among other manufacturing problems, are expected to result in a substantial delay in the distribution of influenza vaccine and possibly substantially fewer total doses of vaccine for distribution than last year.

The Centers for Disease Control and Prevention (CDC) and the Advisory Committee on Immunization Practices (ACIP) have issued the following adjunct influenza vaccination recommendations, specific to the 2000-01 influenza season:[1]

1) Implementation of organized influenza vaccination campaigns should be delayed until early to mid-November, in order to avoid the need to cancel vaccine campaigns and minimize wastage of vaccine doses resulting from delays in vaccine delivery.

2) Influenza vaccination of persons at high risk for complications from influenza and their close contacts should proceed routinely during regular health-care visits. Routine influenza vaccination activities in clinics, offices, hospitals, nursing homes, and other health-care settings (especially vaccination of persons at high risk for complications from influenza, health-care staff, and individuals in close contact with persons at high risk for complications from influenza) should proceed as usual with available vaccine supplies.

3) Provider-specific contingency plans for an influenza vaccine shortage should be developed in order to maximize vaccination of high-risk persons and health-care workers.

There are no new recommendations for the use of influenza antiviral drugs. Influenza antiviral drugs are useful for controlling influenza outbreaks in specific and circumscribed situations, such as nursing homes. In addition, long-term antiviral chemoprophylaxis of high-risk institutionalized residents or some persons at high risk for complications from influenza might be indicated if vaccine either is unavailable, ineffective (i.e. severely immunocompromised persons), or contraindicated. However, these drugs are not a substitute for influenza vaccine.

In addition to the main recommendations, there are several other important points worth emphasizing:

- Once vaccine is available, influenza vaccination should be provided to persons who are at highest risk for complications from influenza, especially high risk young children who are receiving influenza vaccine for the first time and will require two doses. Vaccinations should also be provided to contacts of these high risk individuals.
- Vaccine providers should continue to administer influenza vaccine after mid-November to unvaccinated high-risk persons because delayed vaccination can still provide substantial protective benefits.
- Influenza vaccine purchasers should refrain from placing duplicate orders with multiple companies in order to minimize the amount of vaccine that may be wasted.
- In 2000, the ACIP broadened its influenza vaccine recommendations to include all persons aged 50-64 years. In the context of a possible vaccine shortage, contingency plans for persons aged 50-64 years old should focus primarily on vaccinating individuals with high-risk conditions rather than the entire 50-64 year old age group.
- All health-care workers who have close contact with persons at high risk for complications from influenza should receive the vaccine.

As more information becomes available, the CDC and the Food and Drug Administration will issue updates regarding this situation. In the meantime, the ACIP and CDC request that all persons and organizations that administer influenza vaccine join in the efforts to **maximize** protection of persons most likely to develop serious life-threatening complications from influenza.

For more information, please visit the CDC website at *www.cdc.gov/ncidod/diseases/flu/fluvirus.htm* or call the Hawai`i Immunization Program in Honolulu at (808) 586-8332.

REFERENCE:

[1] Centers for Disease Control and Prevention. Delayed Supply of Influenza Vaccine and Adjunct ACIP Influenza Vaccine Recommendations for the 2000-01 Influenza Season. *MMWR*, 2000;49 (27):619-622.

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Aloha Mits Sugi!

Mitsuto Sugi, M.P.H., Chief of the Hepatitis Control Section of the Epidemiology Branch, retired on August 31, 2000 following 34 years of service with the Department of Health (DOH). When he started in 1966 in the Mosquito Control Branch, Leo Bernstein was Director of Health, Ira Hirschey was chief of the Communicable Disease Division, Dr. Pennington was chief of the Epidemiology Branch and John Gooch was the public health veterinarian. When he joined the Epidemiology Branch in 1968, he was one of two Communicable Disease investigators for the island of O`ahu.

Since "Mits" began working for the DOH, there have been nine Department Directors, nine Communicable Disease Division administrators and 12 Epidemiology Branch Chiefs. Sexually-transmitted diseases are now handled by a separate branch. With the two branches combined, there are now 25 communicable disease investigators responsible for disease investigation and control on O`ahu excluding tuberculosis and Hansen's disease. He later became the lead communicable disease investigator for the Epidemiology Branch, and subsequently Chief of the Investigation Section before assuming his current position. He is also a registered sanitarian.

Mits has been the heart and soul of the Epidemiology Branch for most of this time, dedicating his professional life to the development of the science of epidemiology and branch administration. He has been an invaluable part of the most dynamic growth period in the history of epidemiology and the DOH, including the widespread use of personal computers in public health. In addition to his superiors mentioned by position, he worked alongside some notable personalities in State government, including current Director of Health Bruce Anderson, and former Bishop Estate trustee Henry Peters. He also co-authored many scientific publications.

Through much of his career, Mits was the lead investigator in foodborne outbreaks on O`ahu, and developed the investigation protocols for most of the foodborne diseases used by the DOH today, including that of ciguatera poisoning - one of his favorite "diseases." He also enjoyed long-distance running, including running in the Honolulu Marathon. He was in charge of the investigation into the *Salmonella* outbreak associated with 1987 Honolulu Marathon carbo-loading pre-race dinner, and more recently, the Hepatitis A outbreak at the Governor's mansion. However, because of his experience with foodborne outbreaks and local restaurants, he became reluctant to eat at local restaurants. His homemade peanut butter and jelly sandwiches at the office were not exchanged for "fine" dining at local restaurants, and helped him develop a "Mr. clean" image.

James Ikeda, recently retired Chief of the Environmental Health Services Division who started working with the DOH in 1967, shared some reminiscences about Mr. Sugi. "O`ahu in 1967 was a very different place from what it is now. It was much more rural. For example, Kailua was a town, complete with a dairy. Sugi was known as Mr. Clean, a spic and span no-nonsense individual. While checking animal farms for mosquito problems, and walking on their waste-water treatment ponds, Mr. clean barely got dirty, assigning others to do the dirty work. He and I also got called on the carpet by then Director of Health Walter Quisenberry once because one of us criticized a physician for the treatment of a child with "ukus." Before he and other coworkers were married, they used to come to my home to plant my yard - yes, Sugi had the cleanest hands."

Mits is married with two grown children. We wish him well as he begins a new life. Since he is not planning to continue to work, he can expect a long "honey do" list from wife Jeannie.

Reminiscences were contributed by James K Ikeda, David M. Sasaki, Steven Terrell-Perica, Malcolm Tomooka, and Venie Lee.

Toxoplasmosis and Cats

Toxoplasmosis is caused by the sporozoan *Toxoplasma gondii*. These infections are widespread among humans and animals and **occur only where cats are found.** Human infections are usually mild and/or asymptomatic and are usually undetected and under reported. Occasionally infections may be severe, resulting in blindness, mental retardation or death to children who become infected in the womb (Congenital Toxoplasmosis). A devastating illness may also develop among patients with Acquired Immune Deficiency Syndrome (AIDS) or among patients receiving immunosuppressive therapy in preparation for organ transplants or for tumor therapy.

Prevalence

It is estimated that more than 500 million people are infected by *T. gondii*. Prevalence of infections range from 0 to 90% worldwide.[1] Among adults in the United States, it is estimated that about 30% of the population is infected, but in continental Europe estimates of prevalence range from 50 to 80%. Wallace et.al. (1969)[2] estimated that about 60% of the

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adults in Hawai`i have been infected with *T. gondii*. Frenkel and Ruiz[3] estimated that between 50 to 80% of the population in Costa Rica are infected. Wherever epidemiological surveys have been conducted, the trend shows a steady increase in the prevalence of antibodies with increasing age. Prevalence of infection also varies between ethnic groups, primarily due to differences in sanitation and cooking habits, rather than to genetic differences.

Transmission

Prior to 1970, most infections caused by *T. gondii* were thought to be transmitted via consumption of raw or undercooked meat from infected animals. However, undercooked or raw meat could not account for all human infections. This was especially true of herbivorous animals that became infected and were the source of infections for carnivores and omnivores (including humans). Earlier researchers believed toxoplasmosis was transmitted via blood-sucking arthropod vectors or through contact with animals, especially pet dogs and birds.

The discovery of the sexual development of *T. gondii* in cat intestines and feces by several researchers, namely, Dubey et.al.,[4,5] Hutchinson et. al.,[6] and Wallace,[7] was the missing link in the knowledge of life cycle of the parasite (NOTE: Oocysts are produced in the sexual phase and infective forms or tissue cysts are produced in the asexual phase). Infections caused by the sexually produced form of *T. gondii* occur as a result of ingesting oocysts deposited in the environment through cat feces. The oocysts remain infective for as long as a year or longer in warm-humid conditions and in low-lying areas. Wallace et. al.[2] stated that a few cases of toxoplasmosis in Hawai`i could be attributed to consumption of raw meat but he believed that the great majority of cases are attributed to some type of contact with animals. Wallace[7,9,10,11,12] was able to show the relationship between cats and many intermediate (e.g. passerine birds, chicken, sheep, goats, pigs) and transport (e.g. filth flies, cockroaches, snails, slugs, geckos) hosts to the high incidence of toxoplasmosis infections in Hawai`i. Frenkel and Ruiz[3] showed that cats played a significant role in infecting humans in Costa Rica. A recently completed Department of Health (DOH) Review[8] cited outbreaks of toxoplasmosis involving four distinct environmental conditions, all related to oocysts from infected cats. One of the outbreaks involved patrons of a riding stable; the second involved pre-school aged children with geophagic tendencies; the third involved U.S. Army soldiers who drank contaminated stream water; and the fourth involved laboratory workers working with infected cat feces.

Department of Health Review

The DOH recently completed a review of health hazards of feral cats as a public health concern. Its purpose was to identify potential infectious disease risks associated with stray and feral cats, and possible solutions for disease prevention. Based on information obtained through the review, it was concluded that Hawai`i's environment provides an almost perfect ecosystem for the perpetuation and transmission of toxoplasmosis.

The most common, preventable risk factor identified is the presence and support of feral cat colonies in publicly owned and operated parks. Possible solutions have been identified but require the development of partnerships of understanding among those with community health concerns vs. those who support feral cat colonies. Another option is to develop enforcement tools for coping with the problem if the partnership approach fails. Many other risk factors were identified and possible solutions have been recommended, of which health education of the public in general and hunter education are the primary focus.

For more information, please contact James Ikeda at (808) 586-4701 in Honolulu.

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Submitted by James Ikeda, M.S., Environmental Health Consultant, Environmental Health Services Division.

Hepatitis C Training

On May 15, 2000, the Centers for Disease Control and Prevention (CDC) posted an interactive web-based training program titled "Hepatitis C: What Clinicians and Other Health Professions Need to know."1 It is located on the CDC web site at *http://www.cdc.gov/hepatitis.*

The program provides users with current information on the epidemiology, diagnosis and management of hepatitis C virus (HCV) infection and HCV-related chronic disease. Questions at the end of each section and case studies at the end of the program enable users to obtain continuing medical and nursing education credits on completion of the training. The American Academy of Family Physicians also grant the academy's education credits on completion of training and filing with the academy.

REFERENCE

[1] Centers for Disease Control and Prevention. Notice to Readers: New Web-Based Training on Hepatitis C for Health Professionals. 2000. *MMWR*,49(19): 425.

West Nile Disease Continues on the Mainland U.S.

There have been eight cases of West Nile Disease diagnosed so far this year; seven in New York City (NYC) and one in New Jersey (NJ). Six were from Staten island and one was from Brooklyn in NYC, with one from Trenton (NJ). Ages of the cases ranged from 43-87.

Last fall, 61 people were diagnosed with West Nile disease in the New York City metropolitan area, including seven deaths.[1] This was the first time this disease had been diagnosed in the United States (U.S.). The virus was subsequently isolated from birds (primarily crows) in the northeast. Exotic zoo birds and horses were also affected and had high death rates. Emergency surveillance programs detected epizootic transmission in New Jersey and Connecticut, but all human cases had been exposed in the New York City area.

West Nile Virus (WNV) was diagnosed in February as the cause of death of a red-tailed hawk in Westchester County, New York.[2] Shortly before detection in the hawk, mosquitoes collected in New York were found to be carrying the virus over the winter. Prior to these discoveries, it was unknown whether the virus had been established in the U.S. and whether or not they successfully survived the winter. Following the outbreak, enhanced surveillance of birds and mosquitoes enabled detection of the virus during the winter months. To date this year, the virus has been found in three species of mosquitoes *(2 Culex spp. and 1 Aedes sp.),* and crows, blue jays and a red-tailed hawk. The virus has been found in birds in Massachusetts, New Hampshire, Connecticut, New York, New Jersey and Delaware.

WNV encephalitis is a mosquito-borne disease transmitted by culicine mosquitoes *(Culex spp.)* that affects humans, horses and birds. In humans, it produces a febrile illness, often with a rash, that may develop into a meningoencephalitis. Prior to last fall, the known distribution of the virus included Africa, the Middle East, Europe and western Asia.[3] Birds are considered the primary reservoir, but do not pose a direct threat to humans. To date, American crows and fish crows have accounted for most of the bird deaths.[4] Recent studies by the United States Department of Agriculture and the CDC found that chickens and turkeys were susceptible by injection to the virus,

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Hawai`i Immunization Program

Important Telephone Numbers

Program Manager Malama Ralene Markowitz, R.N., M.S.	586-8330
Vaccine Supply and Distribution Unit Loriann Kanno, Pharm.D.	586-8329
Assessment and Technical Support Unit Marcia Nagao, M.D., M.P.H.	586-8314
Professional Development & Implementation Unit Judy Strait-Jones, M.P.H., M.Ed.	586-8321
CDC Senior Public Health Advisor Steven Terrell-Perica, M.A., M.P.H., M.S.	586-8315

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include: residence or occupation in high-risk congregate settings (e.g., prisons, jails, nursing homes, shelters, health care facilities); birth in a country with endemic TB (e.g., immigrants, refugees, students, some migrant workers); and other socioeconomic predictors of exposure (e.g., low income, inner-city residence).[3] If left untreated, 10% of immunocompetent TST reactors will progress to active TB disease during their lifetime.[3] Clinical conditions that increase the risk of developing active TB disease after LTBI include: diabetes mellitus, injection drug use, silicosis, chronic renal failure, gastrectomy, jejunoileal bypass, solid organ transplantation, and carcinoma of the head or neck.[1,2]

Treatment of LTBI

Changes in treatment options for latent TB infection with isoniazid, rifampin and pyrazinamide were recently released in the ATS/CDC guidelines (see table).[3] These changes have been reviewed and adopted by the DOH TB Control Program and become effective at TB Control Branch facilities on September 1, 2000.

New Targeted Testing Program

The TB Control Branch has received a five year CDC grant to develop a TT Program in Hawai`i. Goals of this targeted testing program include: increased targeted testing among communities at risk for TB infection and disease; and increased education, treatment, and completion of therapy among those started on anti-TB medication.

Program objectives include

- Increased Community Outreach: A Public Health Educator has been hired to work with the communities at risk for specific culturally sensitive TB education.
- Increased Targeted TB Testing: A team will provide on-site TST screening campaigns in high-risk communities.
- Increased Medical Evaluation: persons identified through the screening campaigns with positive TSTs will be referred to the TB Control Program for further medical evaluation (chest x-ray, sputum smear and cultures) and initiation of anti-TB therapy.
- Direct observed preventive therapy (DOPT) will be offered to these identified with LTBI through the TT Program.
- The Community Isoniazid (INH) Program will be able to provide community-based TB services with the support of the DOH TB Control Program.

Trends in TB data suggest that persons at risk for TB infection and disease in Hawai`i include: recent immigrants from TB endemic areas (52% within 1 year and 63.5% within 5 years of immigration); Filipinos (highest incidence in Hawai`i); Koreans; immigrants through COFA; and foreign-exchange post-secondary students.

Participating individuals in the TT Program will have both tuberculin skin testing and symptom screening performed by a public health nurse. Mantoux tuberculin skin testing with purified protein derivative (PPD) tuberculin at 5IU strength will be administered according to CDC/ATS guidelines. A positive skin test will be an induration of 10 mm or greater. Dates and results of past tuberculin skin tests will be requested and recorded. Individuals having a past history of a reactive tuberculin test will be excluded from skin testing, but will have symptom screening for cough greater than 2 weeks duration, fever, weight loss, or hemoptysis. A BCG vaccine history and presence of BCG scar will be noted, but does not exclude tuberculin skin testing.

All new tuberculin reactors or individuals having symptoms suggestive of tuberculosis will be offered free radiographic evaluation through the TB Control Program to exclude tuberculosis disease. All abnormal chest x-rays will be evaluated for tuberculosis by obtaining sputum specimens for acid fast smears and culture. Referral to appropriate specialty physicians will be made for more detailed diagnostic investigations or invasive procedures as indicated by the underlying chest x-ray abnormality.

All individuals with tuberculosis infection will be referred either to a DOH TB Clinic or to their personal physician through the Community INH Program if they are candidates for treatment of LTBI. New CDC/ATS guidelines for the selection of candidates and treatment of LTBI will be followed.[1,2,3] Individuals starting therapy will be offered directly observed preventive therapy (DOPT) services, and monitored until therapy is complete. 'Incentives and enablers' will be used to encourage full participation by patients with LTBI in the program.

Community INH Program

Individuals with TB infection identified in the TT Program who are candidates for treatment of LTBI will have the option of receiving therapy through a participating community clinic or through their private health care provider. The TB Control Program will supply the INH (and/or other anti TB medications) to participating clinics or providers free of charge, and offer patient management assistance and DOPT services. The participating clinics and providers will report demographic, adverse reaction, adherence, and completion of therapy data to the TB Control Program. The TB Control Program will provide a project coordinator to assistant clinics and providers in the collection, storage, monitoring, and reporting of treatment data.

Five community-based clinics have agreed to participate in the first phase of this community partnership, which will incorporate the successful elements of a year-long pediatric TB preventive therapy pilot project jointly administered by the DOH TB Program and the Kalihi-Palama Community Health Center. In addition to Kalihi-Palama, the other participating facilities include Kokua Kalihi Valley Health Center, Waikiki Health Center, Waianae Coast Comprehensive Health Center, Waimanalo Health Center, and Kaiser Permanente Medical Care Program.

When an individual wants their private health care provider to administer preventive therapy, the provider will be in-

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Regimen Options for Treatment of Latent TB Infection in HIV-Negative Persons

Drug	Regimens: Daily – Children Duration	Daily – Adults Duration	Twice Weekly[1] – Children Duration	Twice Weekly[1] – Adults Duration	Comments
Isoniazid	9 months	9 months	9 months	9 months	Minimum of 270 doses administered within 12 months Twice-weekly regimens should consist of at least 76 doses administered within 12 months. Recommended regimen for pregnant women Contraindicated for persons who have active hepatitis and end-state liver disease
Isoniazid		6 months		6 months	Minimum of 180 doses administered within 9 months Twice-weekly regimens should consist of at least 52 doses within 9 months. Recommended regimen for pregnant women 6-month regimen not recommended for those with fibrotic lesions on chest radiographs or children Contraindicated for persons who have active hepatitis and end-state liver disease
Rifampin and Pyrazinamide	Not recommended	2 months	Not recommended	2 or 3 months	Minimum of 60 doses to be administered within 3 months Twice-weekly regimens should consist of at least 16 doses to be administered for 2 months or 24 doses to be administered for 3 months. May be used for isoniazid-intolerant patients Avoid PZAfor pregnant women because of the risk of a verse effects to the fetus. This regimen has not been evaluated in HIV-negative persons. Contraindicated for persons who have active hepatitis and end-stage liver disease.
Rifampin	4 months	4 months	Not recommended		Minimum of 120 doses administered within 6 months For persons who are contacts of patients with INH-resistant, RIF-susceptible TB May be used for patients who cannot tolerate INH or PZA

INH – isoniazid, RIF – rifampin, RFB – rifabutin, PZA– pyrazinamide, EMB – ethambutol

[1] Directly observed treatment of LTBI should be used.

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vited to participate in the INH Community Project and offered all available TB Program support. CDC/ATS guidelines for the selection of candidates and administration of TB preventive therapy will be followed.[1,2,3] Individuals starting preventive therapy will be offered DOPT services, and monitored by the TB Control Program until therapy is complete.

Health Education Activities

The TB Control Program has recently hired a Public Health Educator as part of the TT Program. The primary purpose of this new position is to provide TB education services in the communities identified in the targeted screening process, develop and maintain strategic partnerships with other public and private health care providers and other community organizations involved in TB prevention activities, and manage the Community INH Program. The Public Health Educator will also be responsible for development of 'community-specific' (culturally sensitive and appropriate) educational materials to be utilized during targeted screening activities.

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Program Evaluation

During the TT Program, an evaluation process will be ongoing and may include a community assessment, process, outcome, and impact evaluations. Data analysis will also be used to determine how to allocate program resources, direct location-based screening activities, and determine the effectiveness of the interventions.

The number of individuals with latent TB infection identified during community screening who complete INH preventive therapy will be determined. This activity will be compared with past annual reports for this category. The goal is to meet or exceed national standards of 75% completion of preventive therapy in individuals with latent TB infection who are started on preventive therapy. This statistic will be reported annually to the CDC.

New National Initiatives in TB Control

A recent Institute of Medicine report reviews the current status of TB control in the United States and states the need for the U.S. to take a more active role in global TB control.[4] Strategies for implementation of the report are currently being developed by the CDC and its partners. Several recently released national reports update and revise recommendations for the diagnosis, treatment of LTBI and TB disease.[1,2,3,5] Copies of some of these documents may be obtained from the CDC website at *www.cdc.gov/nchstp/tb* or by contacting the TB Control Program. For questions regarding the new Targeted Testing Program, new reports, implementation of the new guidelines for treatment of LTBI, participation in the Community INH Program or any other TB-related questions, please contact the Tuberculosis Control Program at (808) 832-5737 in Honolulu.

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Submitted by Jessie Wing, M.D., Chief, Tuberculosis Control Branch.

West Nile Disease

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but did not develop clinical signs. A serologic survey conducted in the area of New York city where most of the encephalitis cases were found showed a 2.5% prevalence.[5] For every case of encephalitis, there were 50 cases with silent infections. This suggests that infections with WNV are primarily asymptomatic.

The CDC has developed standardized laboratory tests for the virus, and given grants totalling $2,700,000 to 19 state and local health departments for training and operation of the tests.[6]

Because of bird migration patterns, enhanced surveillance will be conducted this year in potentially affected areas, from Massachusetts to Texas along the Atlantic and Gulf coasts.

It is unlikely that Hawai`i will be affected based on the pattern that emerged in 1999; namely that the migrating suspected carrier birds flew a north-south route, and not east-west. However, the disease could enter through imported pet birds from the east coast. Also, travelers to the East Coast may be at risk. One of the 1999 cases was a resident of Toronto, Canada, who had traveled to New York. Periodic updates during the year may be accessed from the Centers for Disease Control and Prevention's website *http://www.cdc.gov* and weekly publication, the Morbidity and Mortality Weekly Report - also available from the web page.

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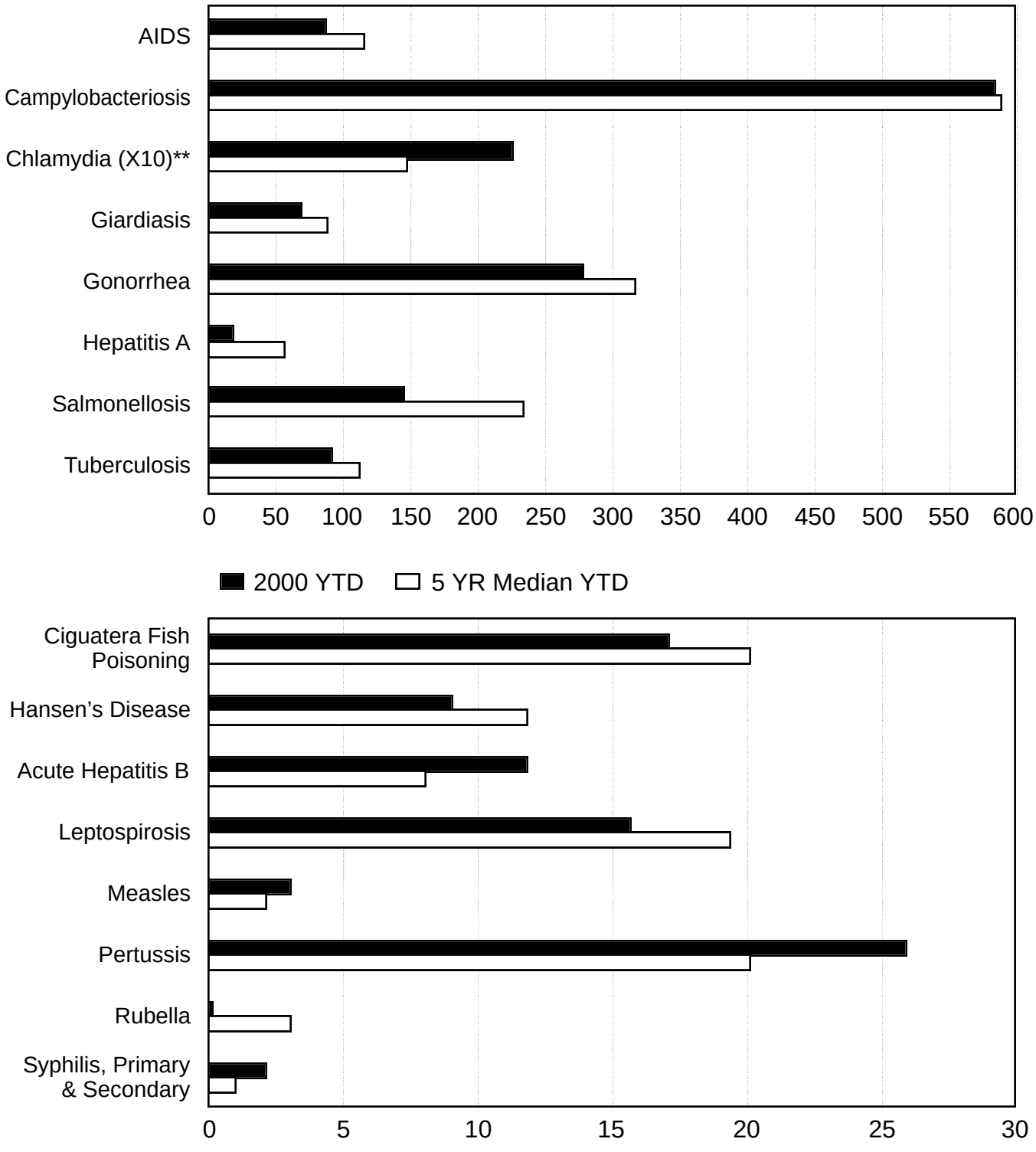
Submitted by David M. Sasaki, D.V.M., M.P.H., Veterinary Medical Officer, Epidemiology Branch.

Communicable Disease Surveillance

Selected Diseases by Date of Report*
Hawai‘i, 2000 Year-to-date Through August



* These data do not agree with tables using date of onset or date of diagnosis.
**The number of cases graphed represent 10% of the total number reported.

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Communicable Disease Report

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September/October 2000

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